

ABSTRACT

A plasma processing unit of the invention includes: a processing container, and a first electrode disposed in the processing container. The first electrode has: a plurality of gas-dispersion holes for supplying a process gas into the processing container, and an opening for a measurement light. A second electrode is arranged on one side of and a predetermined gap away from the gas-dispersion holes and the opening of the first electrode. A power source unit applies electric power between the first electrode and the second electrode and generates plasma between the first electrode and the second electrode. An optical path of a window member adjacently communicates with the other side of the opening for the measurement light. The gas-dispersion holes are formed into a predetermined arrangement, and the opening is formed separately from the gas-dispersion holes without disturbing the arrangement of the gas-dispersion holes. According to the invention, a process gas can be uniformly supplied into the processing container to conduct a uniform plasma process, in spite of existence of the opening and the optical path as a window for monitoring.

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